

DATE: March 29, 2011

SUBJECT: NSG Mission Planning Splinter Minutes

LOCATION: JSC, Regents Park III

ATTENDANCE:

<i>Last Name</i>	<i>First Name</i>	<i>Email Address</i>	<i>Affiliation</i>	<i>Telephone Number</i>
Aquino	Joseph	Joseph.M.Aquino@nasa.gov	JSC/NASA/SCIO	281-483-4033
Bangerter	Jim	James.A.Bangerter@nasa.gov	GSFC/NASA/HSF ND	301-286-7306
Banks	Turonald	Turonald.Banks.contractor@itt.com	GSFC/HSF	301-823-2563
Baum	Earl	earl.j.baum@nasa.gov	JSC/NOIT/DD43	281-483-2321
Beck	Tom	thomas.beck@nasa.gov	WSSH-WSTF	575-524-5556
Blizzard	Melissa	Melissa.L.Blizzard@nasa.gov	GSFC/HSF	301-823-2622
Boatwright	Ernest	Ernest.Boatwright@ljtinc.com	MILA	321-867-1068
Clark	Liz	Elizabeth.M.Clark@nasa.gov	GSFC/HSF	301-823-2625
Colaluca	Victor	victor.colaluca@nasa.gov	KSC/IMCS	321-867-2286
Daniel	Earl	earl.h.daniel@nasa.gov	GSFC/HSF/Docs	301-823-2560
Fahey	Donald	donald.l.fahey@nasa.gov	KSC/IMCS/Abacus	321-867-2500
Fanders	Michael	michael.t.fanders@nasa.gov	JSC/NACAIT	281-483-6069
Foster	William	William.M.Foster-1@nasa.gov	JSC/GC Office	281-483-0640
Frazier	Robert	Robert.B.Frazier@nasa.gov	JSC/NACAIT	281-483-4444
Fulford	George	george.fulford@patrick.af.mil	45 Space Wing/ER	321-853-8326
Gawel	Michael	michael.gawel@patrick.af.mil	45 Space Wing/ER	321-853-8118
Glasscock	David	dglassco@mail.wsc.nasa.gov	WSC	575-527-7035
Greator	Scott	Scott.A.Greator@nasa.gov	GSFC/NASA/NIMO	301-286-6354
Greer	Luke	Luke.Greer-1@nasa.gov	JSC/GC Office	281-482-6249
Harris	Mark	Mark.A.Harris@nasa.gov	WFF	443-310-9041
Hervey	Jewel	jewel.r.hervey@nasa.gov	JSC/NASA/SSP,ISS	281-483-0359

Jones	Ken	ken.jones-2@nasa.gov	JSC/Comm Integration	281-483-7671
Kraesig	Rick	richard.a.kraesig@nasa.gov	JSC/DFE/Cimarron	281-336-5090
Levin	Ryan	ryan.m.levin@nasa.gov	GSFC/HSF	301-823-2641
Lipford	Jay	James.P.Lipford@nasa.gov	JSC/Comm	281-483-4455
Marriott	Robert	Robert.R.Marriott@nasa.gov	JSC/NOIT	281-483-6879
May	Jennifer	Jennifer.M.May@nasa.gov	GSFC/HSF	301-823-2629
Morse	Gary	Gary.A.Morse@nasa.gov	KSC/NASA	321-867-3514
Patel	Kush	Kush.H.Patel@nasa.gov	GSFC/HSF/GNOM	----
Pifer	Fred	fred.g.pifer@nasa.gov	GSFC/HSF	301-805-3335
Richards	Erik	erik.richards-1@nasa.gov	GSFC/HSF	301-823-2645
Riley	Kevin	Kevin.S.Riley@nasa.gov	GSFC/HSF	301-823-2647
Schenk	Harry	harry.schenk@honeywell.com	GSFC/NENS	301-823-2600
Solomon	Douglas	douglas.m.solomon@nasa.gov	GSFC/NISN	301-286-6864
Testoff	Steven	steven.b.testoff@nasa.gov	GSFC/ASRC/HSF	301-286-6538
Thomas, Sr.	Michael	Michael.L.Thomas@nasa.gov	JSC/NISN	281-483-7544
Thompson	Craig	craig.thompson-1@nasa.gov	JSC/SSP/ISS/COTS	281-483-0241
Thornton	Roderick	Roderick.M.Thornton@nasa.gov	KSC/Comm	321-867-2241
Wolfe	Nelson	Nelson.Wolfe.ctr@patrick.af.mil	ER/CSR	321-853-8227
Yettaw	Mike	Michael.e.Yettaw@nasa.gov	DFRC/NASA	661-276-3253
Zhou	Jen	Jen.Zhou@itt.com	GSFC/ITT/SCNS	301-486-4219

INTRODUCTION

Mr. Jim Bangerter convened the March 29, 2011, Network Support Group (NSG) Soyuz-26/27/28 and STS-134/135 mission planning splinter meetings to discuss requirements and mission planning in support of the upcoming missions (refer to the presentations, *Soyuz-26/ Expedition-27*; *Soyuz-27/ Expedition-28*; and *Soyuz-28/ Expedition-29 and STS-134/135 Mission Planning*).

MEETING

- A. Mr. Kevin Riley gave a Soyuz-26/27/28 mission planning overview.
 - 1. Soyuz 26 is scheduled to launch on April 4, 2011. Docking is scheduled for April 6, 2011. Expedition 27 is March 16 through May 16, 2011. Mr. Riley reported that the Mission Status Interim Support Instruction (ISI) went out the morning of March 29. Support will be required for the launch to docking (approximately 50 hours).
 - 2. Soyuz 27 is scheduled to launch on May 30, 2011. Docking is scheduled for June 1, 2011. Expedition 28 is May 16 through September 16, 2011.
 - 3. Soyuz 28 is scheduled to launch on September 30, 2011. Docking is scheduled for October 2, 2011. Expedition 29 is September 16 through November 16, 2011.
 - 4. Goddard Space Flight Center (GSFC) Spaceflight Mission Managers (SMM) and Ground Network Operations Managers (GNOM) provide support Mission Operations Readiness Reviews (MORR), schedule the Eastern Range (ER) and Wallops radars, verify the Very High Frequency (VHF) communications network is ready to support early orbit operations, and support the critical periods.
 - 5. Mr. Riley provided a definition of expedition and increment.
- B. Mr. Erik Richards provided an STS-134/135 mission planning overview.
 - 1. Significant Changes since STS-133. The Near Earth Networks Services (NENS) contract is transitioning to the Space Communications Network Services (SCNS) contract. This transition affects the GSFC Mission Integration and Operations (MI&O), GSFC Test and Integration, GSFC Sustaining Engineering, Merritt Island Launch Annex (MILA) and Ponce de Leon (PDL), Wallops Ground Station (WGS), and the White Sands Complex (WSC). MI&O includes the Human Spaceflight Team (HSF) and Electronic Systems Test laboratory (ESTL).
 - 2. In Flight Anomalies (IFA) from STS-133.
 - (a) IFA STS-133-G-001. WGS experienced an anomaly in the Monitoring and Control software when changing from low to high frequency. This IFA is **CLOSED**.
 - (b) IFA STS-133-G-002. The Second Tracking and Data Relay Satellite System (TDRSS) Ground Terminal (STGT) Common Time Frequency Standard-A (CTFS-A) failed. This IFA is **CLOSED**.
 - (c) IFA STS-133-G-003. The Guam Data Interface System Replacement (GDIS-R) experienced a return service anomaly. This IFA remain under investigation. A work around is in place for STS-134.
 - 3. STS-134 and -135 TDRS 275 Support. JSC events will be scheduled on the Single Access (SA)-2 antenna only. No routine user access support is available on SA-1. The Eastern and Western satellites will be fully utilized to minimize TDRS-275 support time. The SA-1 antenna can only be scheduled if times are designated as Super Critical in the Critical Period Restriction ISI. These times must pre-approved

- by the NASA Network Director (ND). Super Critical is defined as support on TDRS-275 that requires both SA-1 and SA-2 to support the International Space Station (ISS) and a Visiting Vehicle (VV) during docking and undocking.
4. Dual TDRSS Support. Dual TRDSS support has been implemented to provide launch and ascent support previously provided by the Air Force Satellite Control Network (AFSCN) Remote Tracking Sites (RTS) due to the closure of the Onizuka Air Station (OAS). The Space Network (SN) will provide dual TDRS support for launch and ascent. TDRS-East will be available to support as well. Mr. Richards reviewed he launch configuration.
 5. STS-134 and -135 Ground Network (GN) Support. Launch support will be provided via MILA, PDL, and WGS to include Ultra High Frequency Support (UHF), External Tank (ET) TV, and S-band support. On-orbit support will be provided via MILA, WGS, Dryden Flight Research Center (DFRC), and Santiago (AGO). These sites will support all view periods above 7 degrees. AGO is only available outside committed hours of operations with prior approval.
 6. STS-134 and 135 Integrated Network (IN) Diagram. Mr. Richards reviewed the STS-134 and 135 IN diagram. There have been no changes.
 7. Generic STS/ISS TDRS Support Diagram. Mr. Richards reviewed the generic STS/ISS TDRS support diagram. There have been no changes.
 8. Mission Readiness Schedule (MRS). Mr. Richards reviewed the MRS.
 9. Documentation. Mr. Richards reviewed the documentation. ISIs and Operations Messages (OPN) will be issued for each mission.
- C. Mr. Richards provided an STS-134 mission specific support overview.
- (a) STS-134 is scheduled to launch on April 29, 2011. The primary payload is the Alpha Magnetic Spectrometer (AMS). Landing is scheduled for May 13, 2011. The mission duration is 14 days.
 - (b) Mr. Richards reviewed the mission marks and it was noted that the last bullet needed correcting.
 - (c) Four Extra Vehicular Activities (EVA) are planned.
 - (d) Mr. Richards reviewed the STS-134 IN coverage chart.
 - (e) Mr. Richards reviewed the STS-134 network testing chart.
 - (f) Mr. Richards provided an overview of the AMS-02 payload. The AMS is designed to search for antimatter and the origin and structure of dark matter. Testing with the Electronic Systems Test laboratory (ESTL) has been successful. Testing with Guam has not been successful. A 75-Ohm attenuator has been ordered. There is not a Programmable Telemetry Processor (PTP) at the Guam Remote Ground Terminal (GRGT). The medium loop back will be via GDIS-R. Mr. Bob Marriot asked when the part is expected so that JSC can schedule testing. The delivery date was not known. Mr. David Glasscock accepted an action item to expedite shipping the attenuator to Guam and provide a delivery and equipment installation completion date (action item 032911-Miss Plan-01).
 - (g) Mr. Richards reviewed the AMS Guam test configuration. He noted that the Green items designate Guam equipment. Mr. Rick Kraesig noted that there was no issue with the Channel 2 data; only the Channel 3 data.
 - (h) Mr. Richards stated that the one STS-134 concern/issue is the GDIS-R return service anomaly.

- D. Mr. Richards provided an STS-135 mission specific support overview.
 - (a) STS-135 is scheduled to launch June 28, 2011. Landing is To Be Determined (TBD). The mission duration is 12 days.
 - (b) Mr. Richards reviewed the mission marks. It was noted that the rendezvous is scheduled for Flight Day 3 vice Flight Day 4 as shown in the presentation.
 - (c) STS-135 will carry the Robotic Refueling Mission (RRM) which is a satellite servicing demonstration project out of GSFC.
 - (d) Mr. Richards reviewed the STS-135 IN coverage chart. One EVA is scheduled and the EVA will be performed by the ISS crew.
 - (e) Mr. Richards stated that there are no issues/concerns.
- E. Mr. Richards reviewed the backup charts.

ACTION ITEM REVIEW

The following action item was assigned at the March 29, 2011, NSG Mission Planning splinter meeting.

AI No.	Assignee	Action	Status
032911-Miss Plan-01	David Glasscock/ WSC	Expedite shipping the attenuator to Guam and provide a delivery and equipment installation completion date.	Open

(Original Approved By)
Erik Richards
GSFC/HSF

Kevin Riley
GSFC/HSF